

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

LI *et al.*

Appl. No. To be assigned

Filed: Herewith

For: **Human Amine Receptor**

Art Unit: To be assigned

Examiner: To be assigned

Atty. Docket: 1488.0840002/EKS/GLL

**Preliminary Amendment**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

It is respectfully requested that the following amendment be entered in advance of substantive examination. This Amendment is provided in the following format:

(A) A clean version of each replacement paragraph/section/claim along with clear instructions for entry;

(B) Starting on a separate page, appropriate remarks and arguments. 37 C.F.R. § 1.115 and MPEP 714; and

(C) Starting on a separate page, a marked-up version entitled: “Version with markings to show changes made.”

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

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*In the Specification:*

At page 1, after the title and before the first line of text, please insert the following paragraph:

### Cross-Reference to Related Applications

The present application is a continuation of U.S. Patent Appl. No. 09/314,006, filed May 19, 1999, which is a divisional of U.S. Patent Appl. No. 08/467,559, filed June 6, 1995, now U.S. Patent No. 5,928,890, the disclosures of both of which are herein incorporated by reference.

At page 1, please replace the first paragraph with the following paragraph:

## BACKGROUND OF THE INVENTION

## Field of the Invention

This invention relates to newly identified polynucleotides, polypeptides encoded by such polynucleotides, the use of such polynucleotides and polypeptides, as well as the production of such polynucleotides and polypeptides. More particularly, the polypeptides of the present invention are human 7-transmembrane receptors and have been putatively identified as human amine receptors. The invention also relates to inhibiting the action of such polypeptides.

## Related Art

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Figure 2 is an illustration of an amino acid homology alignment between the amine transporter of the present invention (SEQ ID NO:2) (top line) and murine  $\beta$ -1 Adrenoreceptor (SEQ ID NO:9) (bottom line).

At page 6, please replace the eighth paragraph starting at line 33 with the following paragraph:

Figure 3 is an illustration of an amino acid homology alignment between the amine transporter of the present invention (SEQ ID NO:2) (top line) and human dopamine D2 receptor (SEQ ID NO:10) (bottom line).

At page 7, please replace the first paragraph starting at line 3 with the following paragraph:

#### **Detailed Description**

The amine receptor of the present invention may be responsible for re-uptake of one or any of the amine neurotransmitters present in mammalian cells. Examples of such amine transporters include, but are not limited to, dopamine, norepinephrine, epinephrine, serotonin and histamine, and other amino acid transmitters, including GABA, glycine and glutamate.

At page 7, please replace the second paragraph starting at line 10 with the following paragraph:

In accordance with an aspect of the present invention, there is provided an isolated nucleic acid (polynucleotide) which encodes for the mature polypeptide having the deduced amino acid sequence of Figure 1 (SEQ ID NO:2) or for the mature polypeptide encoded by

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the cDNA of the clone deposited under the terms of the Budapest Treaty as ATCC Deposit No. 97181 on June 1, 1995, at the American Type Culture Collection Patent Depository, 10801 University Boulevard, Manassas, VA 20110-2209.

At page 37, please replace the first full paragraph starting at line 5 with the following paragraph:

Unless otherwise stated, transformation was performed as described in the method of Graham, F. and Van der Eb, A., Virology, 52:456-457 (1973).

### **Examples**

At page 39, please replace the first paragraph starting at line 1 with the following paragraph:

The DNA sequence encoding the full length human amine receptor protein, ATCC No. 97181, is amplified using PCR oligonucleotide primers corresponding to the 5' and 3' sequences of the gene:

Please substitute the sequence listing at pages 47-51 of the specification with the substitute sequence listing enclosed herewith. As the substitute sequence listing consists of pages 47-55, please renumber the remaining specification pages accordingly.

The specification has been amended to insert headings, a cross reference to related applications, SEQ ID NOs., the full name and address of the American Type Culture Collection and the accession number of the ATCC deposit. No new matter has been added by this amendment.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

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Date: November 20, 2001

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CONFIDENTIAL

**Version with markings to show changes made**

***In the Specification:***

The specification was amended as follows:

At page 1, after the title and before the first line of text, the following paragraph was inserted:

**Cross-Reference to Related Applications**

The present application is a continuation of U.S. Patent Appl. No. 09/314,006, filed May 19, 1999, which is a divisional of U.S. Patent Appl. No. 08/467,559, filed June 6, 1995, now U.S. Patent No. 5,928,890, the disclosures of both of which are herein incorporated by reference.

At page 1, the first paragraph was replaced with the following paragraph:

**BACKGROUND OF THE INVENTION**

**Field of the Invention**

This invention relates to newly identified polynucleotides, polypeptides encoded by such polynucleotides, the use of such polynucleotides and polypeptides, as well as the production of such polynucleotides and polypeptides. More particularly, the [polypeptide] polypeptides of the present invention are human 7-transmembrane receptors and [has] have

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been putatively identified as [a] human amine [receptor] receptors. The invention also relates to inhibiting the action of such polypeptides.

### **Related Art**

At page 4, the third paragraph starting at line 22 was replaced with the following paragraph:

### **Summary of the Invention**

The polypeptide of the present invention has been putatively identified as an amine receptor. This identification has been made as a result of amino acid sequence homology to the rat amine receptor.

At page 6, the fifth paragraph starting at line 21 was replaced with the following paragraph:

### **Brief Description of the Figures**

The following drawings are illustrative of embodiments of the invention and are not meant to limit the scope of the invention as encompassed by the claims.

At page 6, the sixth paragraph starting at line 24 was replaced with the following paragraph:

Figure 1 illustrates the cDNA sequence (SEQ ID NO:1) and corresponding deduced amino acid sequence (SEQ ID NO:2) of the human amine receptor of the present invention. The standard one-letter abbreviations for amino acids are used. Sequencing was performed using a 373 Automated DNA sequencer (Applied Biosystems, Inc).

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At page 6, the seventh paragraph starting at line 31 was replaced with the following paragraph:

Figure 2 is an illustration of an amino acid homology alignment between the amine transporter [or] of the present invention (SEQ ID NO:2) (top line) and murine  $\beta$ -1 Adrenoreceptor (SEQ ID NO:9) (bottom line).

At page 6, the eighth paragraph starting at line 33 was replaced with the following paragraph:

Figure 3 is an illustration of an amino acid homology alignment between the amine transporter [or] of the present invention (SEQ ID NO:2) (top line) and human dopamine D2 receptor (SEQ ID NO:10) (bottom line).

At page 7, the first paragraph starting at line 3 was replaced with the following paragraph:

#### **Detailed Description**

The amine receptor of the present invention may be responsible for re-uptake of one or any of the amine neurotransmitters present in mammalian cells. Examples of such amine transporters include, but are not limited to, dopamine, norepinephrine, epinephrine, serotonin and histamine, and other amino acid transmitters, including GABA, glycine and glutamate.

At page 7, the second paragraph starting at line 10 was replaced with the following paragraph:

In accordance with an aspect of the present invention, there is provided an isolated nucleic acid (polynucleotide) which encodes for the mature polypeptide having the deduced amino acid sequence of Figure 1 (SEQ ID NO:2) or for the mature polypeptide encoded by the cDNA of the clone deposited under the terms of the Budapest Treaty as ATCC Deposit No. 97181 on June 1, 1995, at the American Type Culture Collection Patent Depository, 10801 University Boulevard, Manassas, VA 20110-2209.

At page 37, the first full paragraph starting at line 5 was replaced with the following paragraph:

Unless otherwise stated, transformation was performed as described in the method of Graham, F. and Van der Eb, A., *Virology*, 52:456-457 (1973).

### **Examples**

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The sequence listing at pages 47-51 of the specification was substituted with the substitute sequence listing enclosed herewith.